

What is claimed is:

- 1      1. A method of assigning identifying indicia to objects in multidimensional space
- 2      comprising the steps of:
  - 3            sorting objects initially according to a first dimension of their location in multi-
  - 4            dimensional space;
  - 5            grouping subsets of objects according to ambiguities in the objects; and
  - 6            ordering ambiguous objects in subsets according to other dimensions of the
  - 7            multidimensional space.
2. The method according to claim 1 wherein said grouping step includes the step of:
  - 1            determining ambiguities among coordinate values of their location in the multi-
  - 2            dimensional space according to whether separation of objects in a dimension is less than
  - 3            a predetermined threshold value.
3. The method according to claim 2 wherein said determining step includes the step of
  - 1            ascertaining a predetermined threshold value based on known errors of position
  - 2            measurements.

- 1        4. The method according to claim 1 including an initial step of:
- 2            selecting as the first dimension of a multidimensional coordinate system that
- 3            dimension along which separation of objects exhibits the greatest dispersion.
- 1        5. The method according to claim 1 wherein said grouping steps includes the step of:
- 2            determining ambiguities among coordinate values according to whether separation of
- 3            targets is less than any of a plurality of predetermined threshold values.
- 1        6. The method according to claim 2 wherein said determining step includes the step of:
- 2            ascertaining a predetermined threshold value based on a maximum rate of change of
- 3            position of one target with respect to any other.
- 1        7. The method according to claim 5 wherein said determining step includes the steps of:
- 2            ascertaining one of said predetermined threshold values based on maximum rate of
- 3            change of position of one object with respect to any other; and
- 4            ascertaining another one of said predetermined threshold values based on the random
- 5            errors of measurements in positions of the objects.

1       8. A method of sorting indicia corresponding to objects moving through a  
2       multidimensional space comprising the steps of:  
3             scanning the multidimensional space to detect positions of objects therein;  
4             assigning unique indicia to each detected object;  
5             sorting assigned indicia along one coordinate axis of the multidimensional space;  
6             grouping into subsets any indicia exhibiting an ambiguity along the coordinate axis;  
7       and  
8             ordering indicia in subsets according to other coordinate axes of the  
9       multidimensional space.

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